

Claims:

1. A pipette gun and holster apparatus having a remote source of positive and negative air pressure, said apparatus comprising:

a) a pipette gun having an external, flexible conduit connecting said gun to said remote air pressure source, said gun including:

i) a housing having a hand grip portion and a barrel portion oriented transverse to said hand grip portion;

ii) a pipette connector fixed to and oriented transverse to said barrel portion;

iii) an internal conduit connected to said external flexible conduit and said pipette connector;

iv) a valve intermediate said internal conduit constructed and arranged to selectively regulate the flow of either positive air pressure or negative air pressure through said internal conduit to said pipette connector;

v) a positive air flow trigger and a negative air flow trigger connected to said valve;

b) a gun holster constructed and arranged to support said gun above a work table with said pipette connector oriented generally, vertically downwardly, said holster including:

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- i) a base;
 - ii) means for fastening said base to a vertical wall;
 - iii) a mounting bracket fixed to and extending transverse to said base, said bracket having a bottomless socket constructed and arranged to receive and removably hold said gun by inserting said pipette connector into said socket.

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2. The apparatus recited in claim 1, said external conduit comprising two-channel plastic tubing having at least a portion of which is recoiling.

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3. The apparatus recited in claim 2, one end of said recoiling portion being connected to said gun and the other end of said recoiling portion being connected to said base.

4. The apparatus recited in claim 3, said external conduit including a non-recoiling portion extending from said base to said air pressure source.

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5. The apparatus recited in claim 4, including a male prong connector fixed to said base for removably joining said recoiling portion and non-recoiling portion of said external conduit.

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6. The apparatus recited in claim 1, said attaching means comprising suction cups, velcro tabs, or magnets.

5 7. The apparatus recited in claim 1, said mounting bracket comprising a pair of forks having a base end and a plurality of prongs, the base end of said forks being fixed to said holster base at vertically-spaced locations.

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10 8. The apparatus recited in claim 7, said socket being circular and being formed in between the prongs of each of said forks.

9. The apparatus recited in claim 8, said socket having a diameter DS larger than the distance DP between the prongs of said forks.

15 10. The apparatus recited in claim 9, said pipette connector having a maximum outer diameter DC less than DS but greater than DP.

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11. The apparatus recited in claim 9, wherein the diameter of the socket DS1 and the distance between the prongs DP1 of the first fork is greater than the diameter of the socket DS2 and the distance between the prongs DP2 of the second fork, respectively.

12. The apparatus recited in claim 11, said pipette connector having a frusto-conical shape and having a maximum outer diameter DC1 greater than DP1, DP2 and DS2 but less than DS1.

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13. The apparatus recited in claim 12, said pipette connector having a minimum outer diameter DC2 greater than DP2 but less than DS1, DP1 and DS2.

14. The apparatus recited in claim 1, said remote air pressure source being fixed to said base.

15. The apparatus recited in claim 1, including a first switch proximate said socket, said switch regulating the flow of power to said remote air source.

16. The apparatus recited in claim 15, said first switch deactivating said remote air source when said gun is parked in said holster, said switch energizing said remote air source when said gun is removed from said holster.

17. The apparatus recited in claim 16, including a second switch which deactivates said remote air source independent of said first switch.

18. The apparatus recited in claim 1, including a mounting pad for said external air pressure source.

19. The apparatus recited in claim 18, said mounting pad comprising a layer of vibration-absorbent material, means for permanently fixing said pad to either a vertical or horizontal surface, and means for removably fixing said remote air pressure source to said pad.

20. The apparatus recited in claim 19, said permanent fixing means comprising a layer of adhesive, said removable fixing means comprising Velcro tab fasteners.

21. The apparatus recited in claim 19, including a plurality of bores arranged to align with feet on said remote air source.

22. A holster for supporting a pipette gun on a vertical surface above or proximate a table top, said pipette gun having a negative and positive air pressure source, pipette connector and a pipette attached to said connector, said holster comprising:

- a) a base;
- b) means for fastening said base to a vertical wall;
- c) a mounting bracket fixed to and extending transverse to said base, said bracket having a bottomless socket constructed and arranged to receive and removably hold said gun by inserting

said pipette connector into said socket,
wherein said holster supports said gun above a work
table with said pipette connector oriented generally,
vertically downwardly.

23. The holster recited in claim 22, including a first switch proximate said socket, said first switch regulating the flow of power to said air source, said first switch constructed and arranged to deactivate said air source when the pipette gun is parked in said holster and to energize said air source when the pipette gun is removed from said holster.

24. The holster recited in claim 23, said mounting bracket comprising a pair of forks having a base end and a plurality of prongs, the base end of said forks being fixed to said holster base at vertically-spaced locations, said socket being circular and being formed in between the prongs of each of said forks.

25. The apparatus recited in claim 24, said socket having a diameter DS larger than the distance DP between the prongs of said forks, said pipette connector having a maximum outer diameter DC less than DS but greater than DP.

26. The apparatus recited in claim 24, wherein

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the diameter of the socket DS1 and the distance between the prongs DP1 of the first fork is greater than the diameter of the socket DS2 and the distance between the prongs DP2 of the second fork, respectively.

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27. The apparatus recited in claim 26, said pipette connector having a frusto-conical shape, a maximum outer diameter DC1 greater than DP1, DP2 and DS2 but less than DS1, and a minimum outer diameter DC2 greater than DP2 but less than DS1, DP1 and DS2.

28. The apparatus recited in claim 22, said remote air pressure source being fixed to said base.

29. A method of metering fluid using a pipette gun, comprising the steps of:

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a) providing a pipette gun having a remote air pressure source and holster assembly, said holster having a base, means for fastening said base to a vertical, a mounting bracket fixed to and extending transverse to said base, said bracket having a bottomless socket;

b) removably fastening said holster to a vertical surface next to or proximate a horizontal work table top;

c) parking the pipette gun in the holster above the work table with said pipette connector and pipette oriented generally, vertically downwardly out of

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contact with the table top;

sub 297 d) removing said pipette gun from said holster and metering fluid with said gun.

5 30. The method recited in claim 29, including the step of:

e) automatically inactivating said external air pressure source when said pipette gun is parked in said holster and automatically activating said external air pressure source when said pipette gun is removed from said holster.

31. A mounting pad for an external positive and negative air pressure pump for a pipette gun, said mounting pad comprising;

5 a) a rectangular base layer of vibration-absorbent material, said base layer having a top side and a bottom side;

sub 307 b) means on the bottom side of said base layer for fastening said pad to either a horizontal or vertical surface;

20 c) means on the top side of said base layer for removably fastening the pump to said pad.

25 32. The mounting pad recited in claim 31, said rectangular base having lengthwise and widthwise dimensions approximately equal to the lengthwise and widthwise dimensions of the pump.

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1. The first step is to identify the key components of the system. This involves understanding the hardware, software, and data involved.